

U.S. ENVIRONMENTAL PROTECTION AGENCY POLLUTION/SITUATION REPORT
Gold King Mine Spill - Region 6



NMED Water Fair

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region VI

Subject: POLREP #20
Gold King Mine Spill - Region 6

Various New Mexico locations, NM
Latitude: 36.8374600 Longitude: -107.9916800

From: Ronnie Crossland, Region 6 Regional Incident Commander (RIC)

Date: 8/27/2015

Reporting Period: 8/26/2015 0700 – 8/26/2015 1900

1. Introduction

1.1 Description of Threat

Region 8 reported approximately three million gallons of mine waste water was released into Cement Creek and the Animas River. The primary environmental concern is the pulse of contaminated water containing sediment and metals flowing as an orange-colored discharge downstream through Durango, Colorado, and into New Mexico and Utah.

1.2 Preliminary Removal Assessment/Removal Site Inspection Results

Water monitoring and sampling is ongoing at public water supply intakes and private wells and field pH levels and other water quality parameters are being monitored.

2. Current Activities

2.1 Operations Section

EPA is developing a Region 6 addendum to the Region 8 Draft Post Incident Gold King Mine Monitoring Plan. Region 6 is developing Data Quality Objectives which will be used for future sampling and monitoring events. The Data Quality Objectives will be discussed with NMED.

Region 6 is coordinating with various agencies to gather historic sediment and service water data. USGS and NMED shared data which is being evaluated by the REOC.

EPA has sent NMED validated data for the following:

- Surface Water Sampling Analytical Data from August 6-14, 2015
- Surface Water Monitoring Data from August 6-14, 2015
- Intake Sediment Sampling Analytical Data from August 10-14, 2015
- Irrigation Ditch Sediment Sampling Analytical Data from August 13-14, 2015
- Private Well Data from August 10-14, 2015 and August 19-21, 2015

Data Posted to the Web

The following data was sent to HQ for final validation and has not yet been posted:

- Drinking Water Intake Surface Water Data from August 15-20
- Sediment Data from Intakes from August 15-21

Community Meeting/VIP

No Community Meetings or VIP visits are scheduled.

Toll-Free Number Activity

The EPA number is now immediately connecting to the Headquarters number.

	08/26/2015	Total to Date
Total Calls Received	0	190
Calls Concerning R6	0	64
Calls Returned by R6	0	64

TOPIC OF CALL	08/26/2015	OVERALL TOTALS
Well Water Test Scheduling	0	20
Water Concerns	0	8
Health Concerns	0	4
Livestock/Irrigation	0	4
Tourism/Media	0	1
Volunteer Offers	0	3
General Concerns	0	18
Contractor/Vendor Support	0	6

Private Drinking Water Well Sampling

Matrix	US EPA Region	Qty. (8/26/2015)	Qty. (Cumulative)
Private Drinking Water Wells Resampled	6	0	100
Private Drinking Water Wells Initial Sample Effort	6	0	114

Surface Water and Sediment Sampling

Matrix	US EPA Region	Qty. (8/26/2015)	Qty. (Cumulative)
Surface Water Samples	6	9	175
Sediment Samples	6	9	154

2.2 Finance Section

Daily Cost Estimates Report						
Region	U.S. EPA Cumulative Expended Payroll	U.S. EPA Cumulative Expended Travel	U.S. EPA Cumulative Other Charges	Cumulative U.S. EPA Contractors Cost	Total Cumulative Costs	Estimated Daily Burn Rate
6	\$359,280.00	\$99,250.00	\$12,989.44	\$2,008,700.00	\$2,480,219.44	\$67,740.00

3. Participating Entities in Region 6

US EPA
USFWS
NMED
NM Department of Health
NM Office of the State Engineer NM
Department of Game and Fish
County of San Juan – New Mexico

4. Personnel

Group	Number
Region 6 EPA @ REOC	12
Region 6 Contractors @ REOC	5
Region 6 Staff in JIC – Durango, CO	3
Region 6 Staff in Area Command – Durango, CO	4
Region 6 EPA OSC	1
Region 6/7 Water Technicians	1
Region 6 EPA Contractors in Field	10

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
San Juan River Response - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IX

Subject: POLREP #14
San Juan River Response
Shiprock, NM
Latitude: 36.8704828 Longitude: -108.7892506

To: Calanog Steve, EPA

From: Kathleen Dillon, Situation Unit Leader

Date: 8/27/2015

Reporting Period:

1. Introduction

1.1 Background

Site Number:	Contract Number:
D.O. Number:	Action Memo Date:
Response Authority:	Response Type:
Response Lead:	Incident Category:
NPL Status:	Operable Unit:
Mobilization Date:	Start Date:
Demob Date:	Completion Date:
CERCLIS ID:	RCRIS ID:
ERNS No.:	State Notification:
FPN#:	Reimbursable Account #:

1.1.1 Incident Category

1.1.2 Site Description

The Gold King Mine near Silverton, Colorado is a historic gold mine at approximately 11,300' elevation. The mine has a continuous discharge of acidic mine drainage that is a significant contributor of manganese, zinc, copper, and cadmium into the Cement Creek drainage of the Animas River watershed. The Gold King Mine has not had maintenance of the mine workings since 1991, and the workings have been inaccessible since 1995 when the mine portal collapsed.

EPA Region 9 is focused on a stretch of the San Juan River extending from Farmington, NM to Mexican Hat, UT.

1.1.2.1 Location

San Juan County, NM and Navajo Reservation. The Animas River flows into the San Juan River at Farmington, NM. After the Animas River meets the San Juan River, the San Juan River continues to flow west through parts of New Mexico, Colorado, and Utah.

1.1.2.2 Description of Threat

Mine waste water was released into Cement Creek and the Animas River. The volume of the release based on US Geological Survey (USGS) Cement Creek gauging station is estimated at three million gallons. The initial environmental concern was the pulse of contaminated water containing sediment and metals discharged in Cement Creek which flows into the Animas River through Durango, Colorado, and into New Mexico where it joins the San Juan River before flowing into Utah. The river is also used for recreational purposes,

including fishing and rafting, and is an important cultural resource for the Navajo Nation.

The leading edge of the release reached the New Mexico border on August 8, 2015 where it eventually discharged into the San Juan River.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Aerial and ground reconnaissance indicates that the plume associated with the Gold King Mine release has dissipated downstream. There is no leading edge of contamination visible in downstream sections of the San Juan River or Lake Powell.

EPA Region 9 is collecting and assessing water quality from the San Juan River from La Plata Highway in New Mexico to Mexican Hat in Utah. Water sampling is occurring, and pH levels and dissolved concentrations of metals are being monitored.

1.2 Incident Objectives

1. Safety

- Provide safe working environment for all response personnel
- Identify safety issues and monitor adherence to Health and Safety Plan
- Maximize protection of public health and welfare

2. Sampling

- Conduct water and sediment sampling from 11 designated locations along the San Juan River
- Conduct sampling from Lake Powell at 11 identified sites
- Synchronize sampling data and information with Area Command

3. Water and Agricultural Needs

- Procure water trucks and establish watering points
- Establish needs and delivery of water and feed for livestock

4. Public Outreach

- Coordinate public forum at which Navajo tribal leaders and community members can address Incident Command representatives.
- Set up a public meeting with members of the Navajo Nation.
- Communicate EPA's position and understanding of issues associated with the San Juan River and respond to public inquiries.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

Farmington ICP is now on a 96-hour operational period with plans to move to a 7-day operational period starting Monday.

Sampling along the San Juan River will continue today. Alfalfa deliveries are ongoing. One START contractor is on scene at Lake Powell gathering samples. **The Shiprock Incident Command Post will be demobilizing today. Farmington Incident Commander will be meeting with Shiprock command staff today to discuss future operations.**

The Community Outreach branch has demobilized while ERRS contractors currently staffing the Logistics Section are expected to demobilize tomorrow. Alfalfa orders will be handled remotely.

2.1.2 Response Actions to Date

Sampling Branch

EPA Region 9 initiated water and sediment sampling efforts on August 9, 2015, to assess the impacts of the release at the Gold King Mine on the San Juan River. Starting on August 9, samples were gathered from the shoreline of the following designated locations along the San Juan River. **After today's sample gathering, samples will not be collected again until Monday due to lack of availability of law enforcement escorts.**

New Mexico

San Juan River at LaPlata Highway (SJLP)
PNM Intake (SJFP)
San Juan River at Hogback (SJHB)
San Juan River at Shiprock (JSR)
San Juan DS from Shiprock (SJDS)
San Juan River at Four Corners (SJ4C)

Utah

San Juan River at McElmo Creek (SJME)
San Juan at Montezuma Creek (SJMC)

San Juan River at Bluff Bridge (SJBB)
San Juan River at Mexican Hat (SJMh)
McElmo Creek Tributary (MECT)

Sample totals are summarized below:

	U.S. EPA Region	Qty. (8/26/2015)	Qty. (Cumulative)
Private Drinking Water Well Samples	9	0	0
Surface Water Samples	9	11	170
Sediment Samples	9	11	152

August 8 - 4 water samples (SJLP, SJFP, SJHB & SJSR)
August 9 - 13 water samples (all sites)
August 10 - 12 water samples, 11 sediment samples (all sites)
August 11 - 13 water samples, 13 sediment samples (all sites)
August 12 - 13 water samples, 13 sediment samples (all sites)
August 13 - 12 water samples, 12 sediment samples (all sites)
August 14 - 12 water samples, 12 sediment samples (all sites)
August 15 - 12 water samples, 12 sediment samples (all sites)
August 16 - 12 water samples, 12 sediment samples (all sites)
August 17 - 12 water samples, 12 sediment samples (all sites)
August 18 - 10 water samples, 10 sediment samples (did not sample at SJSR or SJDS)
August 19 - 10 water samples, 10 sediment samples (did not sample at SJSR or SJDS)
August 20 - no samples collected
August 21 - no samples collected
August 22 - no samples collected
August 23 - no samples collected
August 24 - 12 water samples, 12 sediment samples
August 25 - 12 water samples, 12 sediment samples
August 26 - 11 water samples, 11 sediment samples (did not sample at SJDS)

There have been no requests for well samples and no requests for samples from diversion channels.

Community Relations Branch

All community involvement duties are suspended under the current order.

Water and Feed Delivery Branch

A summary of water and livestock feed deliveries are as follow:

Activity	U.S. EPA Region	8/26/2015			Cumulative		
		Deliveries (each)	Qty. (gal)	Qty. (hay bales)	Deliveries (each)	Qty. (gal)	Qty. (hay bales)
Potable Water Deliveries	9	0	0	0	0	0	0
Livestock / Agricultural Water Deliveries	9	0	0	0	13	218,400	0
Agricultural Food Deliveries	9	0	0	0	9	0	3556

Feed delivered for livestock is as follows:

8/14 - 384 bales of alfalfa delivered to Gaadiiahi chapter
8/21 - 384 bales delivered to Gaadiiahi, 384 bales delivered to Nenahnezad, 384 bales delivered to Hogback, 384 bales delivered to Upper Fruitland
8/22 - 384 bales delivered to Beclibito
8/24 - 384 bales delivered to Shiprock, 384 bales delivered to Red Mesa, 384 bales delivered to Aneth

Two alfalfa deliveries are expected to be made today to Oljeto and Mexican Water. A third delivery is tentatively scheduled for delivery to Navajo Mountain this weekend.

Drinking Water System Impacts

No known water systems in Region 9 have been impacted.

Glen Canyon, Arizona ICP

One START contractor is the only representative to remain on scene in the Lake Powell vicinity. He has been integrated into a USGS/NPS expedition that is expected to conclude on Sunday. Yesterday, the START contractor that had been underway with the expedition was replaced by a different START contractor. The samples collected through yesterday were dropped off for analysis.

Sampling efforts throughout this expedition are detailed below.

Matrix	U.S. EPA Region	Qty. (8/26/2015)	Qty. (Cumulative)
Private Drinking Water Well Samples	9	0	0
Water Samples (at 4 different depths)	9	12	80
Sediment Samples	9	3	20

2.2 Planning Section

2.2.1 Anticipated Activities

Sampling operations along the San Juan River with law enforcement escorts will continue today. However, because Navajo law enforcement representatives are unable to support sampling on a daily basis, sampling will be scaled back to Mondays and Thursdays after today.

One START contractor is the only member that remains working out of the Lake Powell area. He is working with a USGS/NPS crew on scene and has embarked on a 14 day trip. The trip will conclude this weekend.

Feed is continuing to be delivered to various Navajo chapters. A delivery to the Oljeto and Mexican Water chapters is expected today.

2.2.1.2 Next Steps

2.2.2 Issues

On 17AUG15, at approximately 1130, seven members of the Farmington ICP response team were approached in the farmland area of Shiprock by a member of the Navajo Nation. The individual is in opposition to the response operations of Farmington ICP in regards to water and feed deliveries in the Shiprock Chapter. During the confrontation, the response personnel were threatened by being told their vehicles "would be stoned". They were also intimidated by a second vehicle that showed up in support of the individual. The response personnel listened to what the individual had to say and eventually left.

At approximately 1215, another incident occurred with the same individual at the bridge in Shiprock. There, the individual argued with 2 EPA employees and threatened to break their equipment. The individual left after a few minutes. In both cases the response personnel returned to the Farmington ICP and were unharmed.

An investigation is being conducted by the Navajo Department of Criminal Investigation.

On 19AUG15, a video was posted on social media that showed Navajo Nation President and Attorney General alleging contamination in one of the water tanks delivered by the EPA.

2.3 Logistics Section

NAPI requires a 3-day advance notice prior to alfalfa deliveries in order to make appropriate accommodations.

2.4 Finance Section

2.4.1 Narrative

	U.S. EPA	U.S. EPA	U.S. EPA	Cumulative		
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Region	Cumulative Expended Payroll	Cumulative Expended Travel	Cumulative Other Charges	U.S. EPA Contractors Cost	Total Cumulative Costs	Estimated Daily Burn Rate
9				\$921,000 (estimated)	\$957,000(estimated)	\$54,000 (estimated)

2.5 Other Command Staff

2.5.1 Safety Officer

With weather being forecasted into the 90s, hydration is of paramount importance. Additionally, much of the terrain surrounding the river is uneven and rocky. Responders should transit these areas with care.

While transiting throughout the region, responders should be mindful of the potential for contact with wildlife. Scorpions, snakes, and other similar animals raise a potential for injury.

2.5.2 Liaison Officer

Liaison officers are continuing outreach with Navajo community members and representatives of the Navajo Tribe.

2.5.3. Weather Forecast

Weather forecast for Thursday, August 27

FARMINGTON AREA

Today

A mix of sun and clouds with a high of 85, low of 54 and 20% chance of precipitation. Wind coming out of the east at 9 miles per hour.

Tonight

Chance of precipitation tonight. Partly cloudy, with a low around 54.

Tomorrow

Sunny with a high of 88, low of 58. 20% chance of precipitation.

3. Participating Entities

3.1 Area Command

EPA Region 9 is coordinating with EPA Regions 6 and 8, Navajo Nation, and the states of Colorado, New Mexico, Utah, and Arizona. The EPA Region 9 is working with the Navajo Nation to evaluate possible impacts to the Tribe. Potentially impacted water systems have been notified, and precautions are in place to ensure drinking water is protected. The EPA and New Mexico Environmental Department are providing assistance to community water systems and closely monitoring the situation. EPA Region 9 has contacted the Bureau of Indian Affairs regarding potential impacts to the Navajo Nation and is currently working with Navajo liaisons.

3.2 Incident Command and Cooperating Agencies

The Farmington Incident Command includes EPA Region 9 and United States Coast Guard. Donn Zuroski has relieved Bret Moxley as Incident Commander. **Deputy Incident Commander will be demobilizing tomorrow and Incident Commander (Donn Zuroski) will be demobilizing Saturday after being relieved by Tom Dunkleman.**

4. Personnel On Site

Region	Agency / Entity	Number of Personnel (8/26/2015)
	U.S. EPA Personnel	4
	U.S. EPA Contractors	14
	USCG	2
	Other Federal, State, Local and Tribal Entities - 2	

5. Definition of Terms

No information available at this time.

6. Additional sources of information**6.1 Internet location of additional information/report**

www.epa.gov/goldkingmine

7. Situational Reference Materials

No information available at this time.

